The Contextual and Household Contribution to Individual Health Status: What is the Role of Gender and Migration Background?

Daniela Georges, Daniel Kreft & Gabriele Doblhammer
University of Rostock, Department of Sociology and Demography, Chair for Methods in Social Science and Demography

1. Introduction: Why investigate health in the context of households, gender and migration background?

Determinants of individual health are characterized by their multi-dimensionality and operate at different levels (Engel, 1977). The family and the household constellation – as factors on the meso structural level – determine the long-term framework for health, i.e. by transfer of knowledge and economic goods, and thus act as an important factor in the preservation and promotion of the health of their members (Berman, Kendall, & Bhattacharyya, 1994). Previous research frequently shows that different family structures and household compositions are linked with different health risks and advantages, e.g. that married have lower morbidity and mortality rates (Joung, Mheen, H. van de, Stronks, Poppel, F. W. A. Van, & Mackenbach, 1994; Schneider, Rapp, Klein, & Eckhard, 2014; Williams & Umberson, 2004) and that a partnership and parenthood are protective factors in health matters (Helbig, Lampert, Klose, & Jacobi, 2006; Koskinen, Joutsenniemi, Martelin, & Martikainen, 2007; Zunzunegui, Béland, & Otero, 2001). Moreover, familiar and household structures are a key resource in case of illness or disability (Ell, 1996). However, studies on health frequently neglect these characteristics (Hughes & Waite, 2002) or rather focus on marital status than on household characteristics – despite the fact, that private life forms in Germany and most industrialized countries undergo a change. In addition to the traditional family structures (married couples with children) alternative, non-familial forms of life (cohabitation, living alone, living apart together, multigenerational households, single parents) establish increasingly (Meyer, 2006). Therefore, a differentiated approach to the household appears to be necessary and enlightening. In our paper, we are pursuing this research approach, by analyzing the impact of the household structure, particularly the generational composition, on health outcomes in Germany.

In addition to the consideration of the household impact, we perform an analysis of health inequalities in the context of gender and migration background.

Gender inequalities in health have been a major area of research in the past decades, whereby it was mainly found that there are gender-specific patterns in morbidity and mortality (Annandale & Hunt, 2000). Within the households, also different gender roles are produced and reproduced: largely independently of labour force activities, which have been increasingly incorporated into the female gender role in the last decades, household and care work still are female domains (Oláh, Richter, & Kotowska, 2014). Accordingly, women's health is affected stronger by household influences, obligations, resources and constraints (Denton, Prus, & Walters, 2004). Social policies in Germany – with its rather conservative welfare regime – support this traditional distribution of roles.

The second characteristic of differentiation in our research – the migration background – finds it justification and necessity in particular in the German immigrant history. Today, every fifth person in Germany has an immigrant background; the largest immigrant group are Turks (~3 million), which are highly represented in Germany due to the recruitment of guest workers in the 1950s to the 1970s and the subsequent family reunification. Aussiedler are the second large group of immigrants in Germany, who have immigrated to Germany mainly in the 1990s from eastern Europe (especially the former Soviet Union) (Neuhauser & Razum, 2008; Statistisches Bundesamt, 2015). Aussiedler are in the unique situation, that they are legally recognized as "Germans by status" and can directly acquire citizenship, what entitles them to participate in the health system and welfare system. The differences between these two groups and compared to Germans – e.g. regarding the social system, welfare regime and phase of the epidemiological transition in their country of origin, family norms and gender roles – make the consideration of different groups of migrants very worthwihile. While for Aussiedler a high degree of integration and a high similarity to German host population can be demonstrated (Worbs, Bund, Kohls, & von Gostomski, Christian Babka, 2013), Turks differ both in their health situation and many other characteristics from the majority population: they have worse health and a different spectrum of diseases, have lower levels of education, show more traditional gender roles and live in larger households (Friedrich, 2008; Neuhauser & Razum, 2008). In our analyses, we deal in detail with these potentially influencing factors and their relation to health outcomes.

2. Data, methods and variables

We analyse the German Microcensus of the years 2005 and 2009 (Microcensus 2005/2009[1]). The Microcensus is an annually-conducted multi-purpose household survey of one percent of the German population (~830.000 persons per year) (Federal statistical office, 2015). Due to an obligation to provide information for the majority of questions and the presence of information for each member of the household, the Microcensus is highly representative for the German population and well suited to perform reliable analysis at household level. We restrict our analyses to the non-institutionalised working age population of 30 to 64 years at time of survey and consider two analytical approaches: first, logistic regression models are used to calculate sex-specific models. Second, we estimate multilevel regression models for both sexes combined to model the connection between health and the associated characteristics and thus to account for the dependency of observations on the household-level. The analytical framework consists of about 380.000 people at level 1 (individual level), nested within about 247.000 households at level 2 (household level).

The health outcome is modelled by specifying whether a respondent was ill within the last four weeks prior to the survey and the illness lasts/lasted for at least four weeks. We thus consider longstanding illness and exclude persons with short-time illness (e.g. flu or other infection).

As an indicator of the household composition, we consider the generation composition, which reflects the number and composition of generations: one generation (1G-HH), two generations (2G-HH) with one

[1] The distance of four years ensures that individuals are only included once in the dataset.

and two children, 2G-HH with three and more children, 2G-HH with (grand)parents, three or more generations (3+G-HH). In addition, we control for marital status and the presence of a partner in the household to represent familiar and household influences.

The (individual) migration background includes the migration history and ethnic background in first and second generation. We distinguish between native born Germans, Turkish migrants (measured by nationality: parent(s) or the respondent himself had or have Turkish nationality), Aussiedler (measured by legal status: parent(s) or the respondent himself is registered as Aussiedler) and people with a different background ("other").

On the individual level, we further control for age, education, occupational status, BMI and smoking habits and at the household level for equivalent income and migration background of the household.

3. Results

In our sample, 5.47% have a longstanding illness. The proportion is slightly higher among women (5.6%) than among men (5.34%). People, who live in 1G-HH or in a 2G-HH with their (grand)parents have worse health than those in other household structures; the proportion of ill persons is 7.27 % for both groups. The quota is 3.79 % in 2G-HH with one and two children, 3.23 % in 2G-HH with three and more children and 5.30 % in 3+G-HH. Turkish people have worst health in the comparison of the migrant groups (8.01% vs. 5.39-5.48 %).

With respect to the generation composition we find, that 1G-HH occur most frequently (48%), followed by 2G-HH with one and two children (44%). 2G-HH with three and more children are rare (7%), 2G-HH with (grand)parents (1%) as well as 3-+G-HH (1%) are a minority. There are no gender differences in this characteristic, but differences by migration background can be determined: While the majority of native Germans lives in 1G-HH (50.08 %) followed by 42.68 % in 2G-HH with one and two children, 2G-HH with one and two children are the most common composition among the other migrant groups. It is also striking that particularly Turks live in rather uncommon household structures, i.e. with three and more children (24.79 %) or in 3+G-HH (2.42 %). Thus, our descriptive findings show a high similarity to other studies and the results of the German Federal Statistical Office.

Our multivariate analysis show significant influences of the generational household structure on health. In all sex-specific models, persons in 1G-HH have worst health, while persons in 2G-HH with three and more children have best health. Women in 1G-HH have an approximately twofold increased risk of longstanding illness compared to women in 2G-HH with three and more children; among men this factor is about 1.2. The socio-economic status explains the majority of this gap among men but not among women: controlled for the socio-economic status, the group differences even increase in our female subsample. Health differences by migration background are fully explained by economic and lifestyle factors among men, but show up among women to the extent, that German and Turkish women do not differ in their health status, but Aussiedler show 20% lower risks of illness. The comparison of the sex-specific models illustrates that there are partly different mechanisms that establish the health of men and women. Our models are more likely to reflect the reality of life for women. What impact this has for the

entire examined population therefore seems worthy of investigation. The evaluation of a pooled multilevel model also facilitates to specify the contextual household effect on health.

It turns out, that the results for the entire sample reflect mainly the effects among women. Again, persons living in 1G-HH have worse health compared to the other subgroups. The risk of longstanding illness is 22%-37 % lower for those in 2G-HH with one and two children ($p<0.001$), 33%-45% lower for those in 2G-HH with three and more children ($p<0.001$) and 17%-24 % lower for those in 3+G-HH ($p<0.05$). These effects are remarkably stable and only weakly altered by other characteristics. Only people in 2G-HH with (grand)parents do not differ from persons in 1G-HH. Differences between Germans and Turks are explained by socio-economic factors and the contextual embedding, whereas Aussiedler, again, have better health than Germans. We also find that further household characteristics affect health: widows have a slightly better health than singles, divorced a slightly worse. The presence of a partner in the same household has a constantly positive effect.

4. Discussion

Our results show that not only family characteristics (marital status and partnership), but also the household structure is associated with health. Those living in 1G-HH are exposed to greater health risks, which mainly are not explained or offset by other factors. Couples without children and singles may thus be identified as particularly vulnerable groups. Furthermore, our findings suggest, that living with children results in health benefits. These results apply to a greater extent for women. Overall, household characteristics are more influential among women, which is consistent with existing findings. Another conclusion are the fundamentally huge health differences depending on the migration background. Turks are less healthy than Germans, however, these differences are mainly driven by socio-economic disadvantages and worse contextual embedding and thus disappear after controlling for these characteristics.

To what extent these findings can be generalised and apply to other countries, however, has to be verified. We assume that household structures and their impact are highly dependent on social policies, familial norms, gender roles and other characteristics, and thus a conclusion for other countries than Germany is likely not permitted. Another limitation arises in the fact that causalities and heterogeneity cannot be clarified in our study, e.g.: Are people ill because they live alone or do they live alone because of illness? What are the motivations or constraints to maintain the household structure? What is the quality of relationships within the household and to what extent do the household members support each other? These questions have to remain unanswered for the moment.

Nevertheless, our results provide two key implications: first, they indicate the need for and the potential of health interventions at the household level. Since the influence of the household structure is the same for men and women resp. Germans, Turks and Aussiedler, measures and interventions can be understood as a global approach. Secondly, a reduction of socio-economic differences would also reduce health inequalities. As our results show, the socio-economic situation is an important mediator for health disadvantages among migrants and in the gender comparison.

References

Annandale, E., & Hunt, K. (2000). *Gender inequalities in health*. Buckingham, Philadelphia: Open University Press.

Berman, P., Kendall, C., & Bhattacharyya, K. (1994). The household production of health: Integrating social science perspectives on micro-level health determinants. *Social Science & Medicine, 38*(2), 205–215.

Denton, M., Prus, S., & Walters, V. (2004). Gender differences in health: a Canadian study of the psychosocial, structural and behavioural determinants of health. *Social Science & Medicine, 58*(12), 2585–2600. doi:10.1016/j.socscimed.2003.09.008

Ell, K. (1996). Social networks, social support and coping with serious illness: The family connection. *Social Science & Medicine, 42*(2), 173–183. doi:10.1016/0277-9536(95)00100-X

Engel, G. L. (1977). The Need for a New Medical Model: A Challenge for Biomedicine. *Science, 196*(4286), 129–136.

Federal statistical office. (2015). *Elucidations to the Microcensus*. Retrieved from https://www.destatis.de/DE/ZahlenFakten/GesellschaftStaat/Bevoelkerung/Methoden/Mikrozensus.html

Friedrich, L. (2008). *Wohnen und innerstädtische Segregation von Migranten in Deutschland: Integrationsreport*. Nürnberg.

Helbig, S., Lampert, T., Klose, M., & Jacobi, F. (2006). Is parenthood associated with mental health? Findings from an epidemiological community survey. *Social psychiatry and psychiatric epidemiology, 41*(11), 889–896. doi:10.1007/s00127-006-0113-8

Hughes, M. E., & Waite, L. J. (2002). Health in Household Context: Living Arrangements and Health in Late Middle Age. *J Health Soc Behav., 43*(1), 1–21.

Joung, I., Mheen, H. van de, Stronks, K., Poppel, F. W. A. Van, & Mackenbach, J. P. (1994). Differences in Self-Reported Morbidity by Marital Status and by Living Arrangement. *International journal of epidemiology, 23*(1), 91–97. doi:10.1093/ije/23.1.91

Koskinen, S., Joutsenniemi, K., Martelin, T., & Martikainen, P. (2007). Mortality differences according to living arrangements. *International journal of epidemiology, 36*(6), 1255–1264. doi:10.1093/ije/dym212

Meyer, T. (2006). Private Lebensformen im Wandel. In *Die Sozialstruktur Deutschlands* (pp. 331–357). Wiesbaden: VS Verlag für Sozialwissenschaften.

Neuhauser, H., & Razum, O. (2008). *Migration und Gesundheit: Schwerpunktbericht der Gesundheitsberichterstattung des Bundes. Gesundheitsberichterstattung des Bundes*. Berlin: Robert-Koch-Inst.

Oláh, L. S., Richter, R., & Kotowska, I. E. (2014). *State-of-the-art report The new roles of men and women and implications for families and societies.: State-of-the-art report* (Families And Societies No. 11/2014). Retrieved from http://www.familiesandsocieties.eu/wp-content/uploads/2014/12/WP11OlahEtAl2014.pdf

Schneider, B., Rapp, I., Klein, T., & Eckhard, J. (2014). Relationship status and health: Does the use of different relationship indicators matter? *Global public health, 9*(5), 528–537. doi:10.1080/17441692.2014.904917

Statistisches Bundesamt. (2015). *Bevölkerung und Erwerbstätigkeit. Bevölkerung mit Migrationshintergrund.: Ergebnisse des Mikrozensus*. Wiesbaden.

Williams, K., & Umberson, D. (2004). Marital Status, Marital Transitions, and Health: A Gendered Life Course Perspective. *Journal of Health and Social Behavior, 45*(1), 81–98. doi:10.1177/002214650404500106

Worbs, S., Bund, E., Kohls, M., & von Gostomski, Christian Babka. (2013). *(Spät-)Aussiedler in Deutschland: Eine Analyse aktueller Daten und Forschungsergebnisse. Forschungsbericht / Bundesamt für Migration und Flüchtlinge: Vol. 20*. Nürnberg: Bundesamt für Migration und Flüchtlinge.

Zunzunegui, M. V., Béland, F., & Otero, A. (2001). Support from children, living arrangements, self-rated health and depressive symptoms of older people in Spain. *International Journal of Epidemiology, 30*(5), 1090–1099.